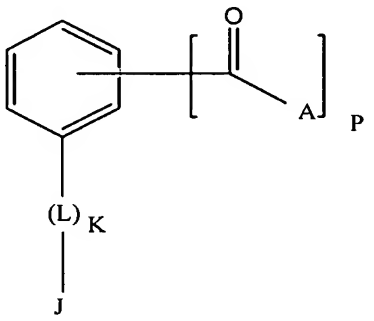
## IN THE CLAIMS

1-11. (Canceled)

12. (Currently Amended) A method for identifying compounds that are capable of targeted inactivation of the nuclear localization signal of a protein comprising:

(a) contacting an immobilized cellular receptor moiety with a protein comprising a nuclear localization signal, and a compound having the formula:




wherein A, independently, = $CH_3$, $CH_2CH_3$, COH, $COCH_3$, $COCH_2CH_3$, $CH_2COCH_3$, $CH_2COCH_2CH_3$, $C(CH_3)_2COCH_3$, or $C(CH_3)_2COCH_2CH_3$; P = 1 or 2; L is a linker group containing an ~~S, O, N or C atom;~~ O atom; K = [[0 or]] 1; and wherein J represents (i) a saturated or unsaturated, substituted or unsubstituted, straight or branched acyclic hydrocarbon group; (ii) a saturated or unsaturated, substituted or unsubstituted, straight or branched acyclic group ~~containing~~ that contains one or more hetero atoms ~~such as~~ selected from the group consisting of nitrogen, sulfur [[or]] and oxygen; (iii) a substituted or unsubstituted, saturated or aromatic, mono- or poly- cyclic group having 3 to 20 carbon atoms; or (iv) a substituted or unsubstituted, saturated or aromatic, mono- or poly- heterocyclic group having 3 to 20 atoms, at least one of which is a nitrogen, sulfur or oxygen;

(b) measuring the binding of the protein to the immobilized cellular receptor moiety; and

(c) comparing the quantity of the protein bound to the quantity of protein bound in the

absence of the compound,

where a reduction in the quantity of the bound protein in the presence of the compound is indicative of targeted inactivation of the nuclear localization signal by the compound.

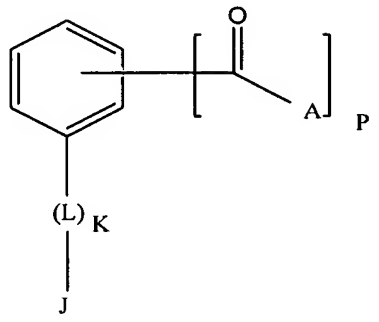
13. (Original) The method of Claim 12, wherein the protein is in a complex.

14. (Original) The method of Claim 12, wherein the protein is derived from a human immunodeficiency virus, influenza virus, hepatitis virus, herpes simplex virus, papillomarvirus, parvovirus or measles virus.

15. (Original) The method of Claim 12, wherein the cellular receptor moiety is karyopherin α.

16. (Currently Amended) A method for identifying compounds that are capable of targeted inactivation of the nuclear localization signal of a viral nucleoprotein complex comprising:

(a) contacting an immobilized karyopherin α with a viral nucleoprotein complex contained in a cytoplasmic extract, said complex comprising viral nucleic acid and said cytoplasmic extract prepared from cells infected by the virus, and a compound having the formula:




(I)

wherein A, independently, = $CH_3$, $CH_2CH_3$, COH, $COCH_3$, $COCH_2CH_3$, $CH_2COCH_3$, $CH_2COCH_2CH_3$, $C(CH_3)_2COCH_3$, or $C(CH_3)_2COCH_2CH_3$; P = 1 or 2; L is a linker group containing an ~~S, O, N or C atom;~~ O atom; K = [[0 or]] 1; and wherein J represents (i) a saturated or unsaturated, substituted or unsubstituted, straight or branched acyclic hydrocarbon group; (ii) a saturated or unsaturated, substituted or unsubstituted, straight or branched acyclic group ~~containing~~ that contains one or more hetero atoms ~~such as~~ selected from the group consisting of nitrogen, sulfur [[or]] and oxygen; (iii) a substituted or unsubstituted, saturated or aromatic, mono- or poly- cyclic group having 3 to 20 carbon atoms; or (iv) a substituted or unsubstituted, saturated or aromatic, mono- or poly- heterocyclic group having 3 to 20 atoms, at least one of which is a nitrogen, sulfur or oxygen;

(b) measuring the binding of said complex to the immobilized karyopherin α by quantitating the amount of viral nucleic acids associated with said complex; and

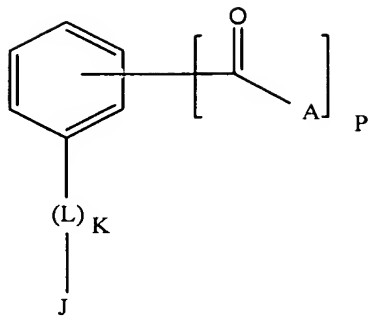
(c) comparing the quantity of the nucleic acid bound to the quantity of nucleic acid bound in the absence of the compound;

wherein a reduction in the quantity of the bound nucleic acid in the presence of the compound is indicative of targeted inactivation of the nuclear localization signal by the compound.

17. (Currently Amended) A compound ~~that is capable of:~~

~~(a) interacting with a molecule in a complex having a specific docking site which is positioned proximately to a nuclear localization signal of a protein in the complex; and~~

~~(b) forming stable reversible covalent interactions with basic amino acid residues of the nuclear localization signal of the protein; and~~ having the formula:



(I)

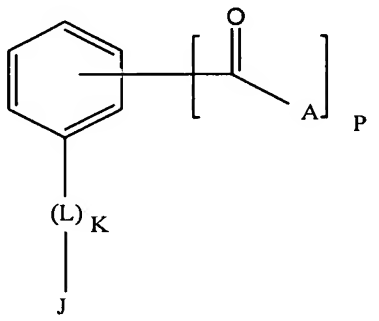
wherein A, independently, = $CH_3$, $CH_2CH_3$, COH, $COCH_3$, $COCH_2CH_3$, $CH_2COCH_3$, $CH_2COCH_2CH_3$, $C(CH_3)_2COCH_3$, or $C(CH_3)_2COCH_2CH_3$; P = 1 or 2; L is a linker group containing an ~~S, O, N or C atom;~~ O atom; K=[[0 or]]1; and wherein J represents (i) a saturated or unsaturated, substituted or unsubstituted, straight or branched acyclic hydrocarbon group; (ii) a saturated or unsaturated, substituted or unsubstituted, straight or branched acyclic group ~~containing~~ that contains one or more hetero atoms ~~such as~~ selected from the group consisting of nitrogen, sulfur [[or]] and oxygen; (iii) a substituted or unsubstituted, saturated or aromatic, mono- or poly- cyclic group having 3 to 20 carbon atoms; or (iv) a substituted or unsubstituted, saturated or aromatic, mono- or poly- heterocyclic group having 3 to 20 atoms, at least one of which is nitrogen, sulfur or oxygen.

18. (Original) The compound of Claim 17, wherein the protein is derived from a virus.

19. (Original) The compound of Claim 17, wherein the protein is derived from a human immunodeficiency virus, influenza virus, hepatitis virus, herpes simplex virus, papillomavirus, parvovirus or measles virus.

20. (Currently Amended) A method of preventing productive infection by a virus of a proliferating population of cells~~, which comprises~~ by preventing importation of a complex containing viral nucleic acid or viral protein into the nucleus of a cell in the population, which

comprises the administration of an effective amount of a pharmaceutical composition containing a compound according to the formula:




(I)

wherein A, independently, = $CH_3$, $CH_2CH_3$, COH, $COCH_3$, $COCH_2CH_3$, $CH_2COCH_3$, $CH_2COCH_2CH_3$, $C(CH_3)_2COCH_3$, or $C(CH_3)_2COCH_2CH_3$; P = 1 or 2; L is a linker group containing an O atom; K = 1; and wherein J represents (i) a saturated or unsaturated, substituted or unsubstituted, straight or branched acyclic hydrocarbon group; (ii) a saturated or unsaturated, substituted or unsubstituted, straight or branched acyclic group that contains one or more hetero atoms selected from the group consisting of nitrogen, sulfur and oxygen; (iii) a substituted or unsubstituted, saturated or aromatic, mono- or poly- cyclic group having 3 to 20 carbon atoms; or (iv) a substituted or unsubstituted, saturated or aromatic, mono- or poly- heterocyclic group having 3 to 20 atoms, at least one of which is nitrogen, sulfur or oxygen.

21-27. (Canceled)

28.(Previously Presented) The compound of Claim 17, wherein K = 1, L is a linker group containing an O atom, and J is (iv) a substituted or unsubstituted, saturated or aromatic, mono- or poly- heterocyclic group having 3 to 20 atoms, at least one of which is nitrogen, sulfur or oxygen.

29. (Previously Presented) The compound of Claim 17, wherein K = 1 and L is -O-.

30. (Previously Presented) The compound of Claim 17 wherein K = 1, L is a linker group containing an O atom, and J is a substituted or unsubstituted five or six membered ring having 1-4 hetero ring atoms, at least one of which is nitrogen and the remainder of which are selected from the group consisting of nitrogen, oxygen, sulfur, and a combination thereof.

31. (Previously Presented) The compound of Claim 17, wherein K = 1, L is a linker group containing an O atom, and J is selected from the group consisting of pyrimidine, pyridine, pyrrole, imidazole, thiazole, isothiazole, isoxazole, furazan, pyrrolidine, piperidine, imidazolidine, piperazine, oxazole, tetrazole, pyrazole, triazole, oxadiazole, and thiodiazole, and may be unsubsituted or substituted with one or more substituents selected from the group consisting of alkyl, alkoxy, phenoxy, alkenyl, alkynyl, phenylalkyl, hydroxyalkyl, haloalkyl, aryl, arylalkyl, alkyloxy, alkylthio, alkenylthio, phenylalkylthio, hydroxyalkylthio, alkylthiocarbamylthio, phenyl, cyclohexyl, pyridyl, piperidinyl, alkylamino, amino, nitro, mercapto, cyano, hydroxyl, halogen, and a combination thereof.

32. (Previously Presented) The compound of Claim 17, wherein K = 1, L is -O-, and J is a substituted or unsubstituted pyrimidine group.

33-34. (Canceled)

35. (New) The method of Claim 12, wherein K = 1, L is a linker group containing an O atom, and J is (iv) a substituted or unsubstituted, saturated or aromatic, mono- or poly-heterocyclic group having 3 to 20 atoms, at least one of which is nitrogen, sulfur or oxygen.

36. (New) The method of Claim 12, wherein K = 1 and L is -O-.

37. (New) The method of Claim 12, wherein K = 1, L is a linker group containing an O atom, and J is a substituted or unsubstituted five or six membered ring having 1-4 hetero ring atoms, at least one of which is nitrogen and the remainder of which are selected from the group consisting of nitrogen, oxygen, sulfur, and a combination thereof.

38. (New) The method of Claim 12, wherein K = 1, L is a linker group containing an O atom, and J is selected from the group consisting of pyrimidine, pyridine, pyrrole, imidazole, thiazole, isothiazole, isoxazole, furazan, pyrrolidine, piperidine, imidazolidine, piperazine, oxazole, tetrazole, pyrazole, triazole, oxadiazole, and thiodiazole, and may be unsubsituted or substituted with one or more substituents selected from the group consisting of alkyl, alkoxy, phenoxy, alkenyl, alkynyl, phenylalkyl, hydroxyalkyl, haloalkyl, aryl, arylalkyl, alkyloxy, alkylthio, alkenylthio, phenylalkylthio, hydroxyalkylthio, alkylthiocarbamylthio, phenyl, cyclohexyl, pyridyl, piperidinyl, alkylamino, amino, nitro, mercapto, cyano, hydroxyl, halogen, and a combination thereof.

39. (New) The method of Claim 12, wherein K = 1, L is -O-, and J is a substituted or unsubstituted pyrimidine group.

40. (New) The method of Claim 16, wherein K = 1, L is a linker group containing an O atom, and J is (iv) a substituted or unsubstituted, saturated or aromatic, mono- or poly-heterocyclic group having 3 to 20 atoms, at least one of which is nitrogen, sulfur or oxygen.

41. (New) The method of Claim 16, wherein K = 1 and L is -O-.

42. (New) The method of Claim 16, wherein K = 1, L is a linker group containing an O atom, and J is a substituted or unsubstituted five or six membered ring having 1-4 hetero ring atoms, at least one of which is nitrogen and the remainder of which are selected from the group consisting of nitrogen, oxygen, sulfur, and a combination thereof.

43. (New) The method of Claim 16, wherein K = 1, L is a linker group containing an O atom, and J is selected from the group consisting of pyrimidine, pyridine, pyrrole, imidazole, thiazole, isothiazole, isoxazole, furazan, pyrrolidine, piperidine, imidazolidine, piperazine, oxazole, tetrazole, pyrazole, triazole, oxadiazole, and thiodiazole, and may be unsubsituted or substituted with one or more substituents selected from the group consisting of alkyl, alkoxy,

phenoxy, alkenyl, alkynyl, phenylalkyl, hydroxyalkyl, haloalkyl, aryl, arylalkyl, alkyloxy, alkylthio, alkenylthio, phenylalkylthio, hydroxyalkylthio, alkylthiocarbamylthio, phenyl, cyclohexyl, pyridyl, piperidinyl, alkylamino, amino, nitro, mercapto, cyano, hydroxyl, halogen, and a combination thereof.

44. (New) The method of Claim 16, wherein K = 1, L is -O-, and J is a substituted or unsubstituted pyrimidine group.

45. (New) The method of Claim 20, wherein K = 1, L is a linker group containing an O atom, and J is (iv) a substituted or unsubstituted, saturated or aromatic, mono- or poly-heterocyclic group having 3 to 20 atoms, at least one of which is nitrogen, sulfur or oxygen.

46. (New) The method of Claim 20, wherein K = 1 and L is -O-.

47. (New) The method of Claim 20, wherein K = 1, L is a linker group containing an O atom, and J is a substituted or unsubstituted five or six membered ring having 1-4 hetero ring atoms, at least one of which is nitrogen and the remainder of which are selected from the group consisting of nitrogen, oxygen, sulfur, and a combination thereof.

48. (New) The method of Claim 20, wherein K = 1, L is a linker group containing an O atom, and J is selected from the group consisting of pyrimidine, pyridine, pyrrole, imidazole, thiazole, isothiazole, isoxazole, furazan, pyrrolidine, piperidine, imidazolidine, piperazine, oxazole, tetrazole, pyrazole, triazole, oxadiazole, and thiodiazole, and may be unsubsituted or substituted with one or more substituents selected from the group consisting of alkyl, alkoxy, phenoxy, alkenyl, alkynyl, phenylalkyl, hydroxyalkyl, haloalkyl, aryl, arylalkyl, alkyloxy, alkylthio, alkenylthio, phenylalkylthio, hydroxyalkylthio, alkylthiocarbamylthio, phenyl, cyclohexyl, pyridyl, piperidinyl, alkylamino, amino, nitro, mercapto, cyano, hydroxyl, halogen, and a combination thereof.

49. (New) The method of Claim 20, wherein K = 1, L is -O-, and J is a substituted or unsubstituted pyrimidine group.

50. (New) The compound of Claim 17, wherein P=1.

51. (New) The compound of Claim 17, wherein P=2.